

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A stage assembly that moves a device, the stage assembly comprising:

a device table that retains the device;

a stage mover assembly connected to the device table, the stage mover assembly moves the device table;

a measurement system for monitoring the position of the device table, the measurement system including a first X mirror and a second X mirror that are secured to the device table;

a first fiducial mark and a second fiducial mark that are secured to the device table; ~~and, the fiducial marks being used to determine the position of the first X mirror relative to the second X mirror~~

a control system that utilizes the first fiducial mark and the second fiducial mark to determine the position of the first X mirror relative to the second X mirror.

2. (Original) The stage assembly of claim 1 wherein the measurement system includes a first X block that interacts with the first X mirror to monitor the position of the device table.

3. (Original) The stage assembly of claim 2 wherein the first X block interacts with the first X mirror to monitor the position of the device table when the device table is in an alignment position.

4. (Original) The stage assembly of claim 3 wherein the measurement system includes a second X block that interacts with the second X mirror to monitor the position of the device table.

5. (Original) The stage assembly of claim 4 wherein the second X block interacts with the second X mirror to monitor the position of the device table when the device table is in an operational position.

6. (Cancelled)

7. (Currently Amended) The stage assembly of ~~claim 6~~ claim 1 wherein the measurement system measures (i) the position of the first fiducial mark relative to the first X mirror and the second X mirror, and (ii) the position of the second fiducial mark relative to the first X mirror and the second X mirror.

8. (Previously Presented) The stage assembly of claim 7 wherein the control system utilizes the measured position of the first fiducial mark relative to the first X mirror and the second X mirror, and the measured position of the second fiducial mark relative to the first X mirror and the second X mirror to determine the position of the first X mirror relative to the second X mirror.

9. (Original) The stage assembly of claim 1 including a third fiducial mark secured to the device table, the third fiducial mark also being used to determine the position of the first X mirror relative to the second X mirror.

10. (Currently Amended) The stage assembly of claim 9 ~~further comprising a wherein the control system that~~ utilizes the first fiducial mark, the second fiducial mark and the third fiducial mark to determine the position of the first X mirror relative to the second X mirror.

11. (Original) The stage assembly of claim 10 wherein the measurement system measures (i) the position of the first fiducial mark relative to the first X mirror and the second X mirror, (ii) the position of the second fiducial mark relative to the first X mirror and the second X mirror, and (iii) the position of the third fiducial mark relative to the first X mirror and the second X mirror.

12. (Currently Amended) The stage assembly of claim 11 wherein the control system utilizes (i) the measured position of the first fiducial mark relative to the first X mirror and the second X mirror, (ii) the measured position of the second fiducial mark relative to the first X mirror and the second X mirror, and (iii) the measured position of the third fiducial mark relative to the first X mirror and the second X mirror to determine the position of the first X mirror relative to the second X mirror.

13. (Previously Presented) An exposure apparatus comprising:

a first movable stage that moves in a first direction and a second direction different from the first direction, the first movable stage holding a first substrate and having a first reflective portion extending in the first direction, a second reflective portion parallel to the first reflective portion, and a first mark portion having a plurality of fiducial marks;

a first position detector that detects a position of the first movable stage cooperating with the first reflective portion;

a first mark detector that detects the plurality of fiducial marks when the first position detector detects the position of the first movable stage;

a second position detector that detects a position of the first movable stage cooperating with the second reflective portion;

a second mark detector that detects the plurality of fiducial marks when the second position detector detects the position of the first movable stage;

a projection system that projects a pattern onto the first substrate; and

a controller that communicates with the first position detector, the second position detector, the first mark detector, and the second mark detector to correlate the first reflective portion with the second reflective portion.

14. - 15. (Cancelled)

16. (Original) A method for determining the relative positions of a first X mirror and a second X mirror that are secured to a device table, the method comprising the steps of :

securing a first fiducial mark and a second fiducial mark to the device table;

and

determining the position of the first X mirror relative to the second X mirror using the first fiducial mark and the second fiducial mark.

17. (Original) The method of claim 16 including the step of providing a first X block that interacts with the first X mirror to monitor the position of the device table in an alignment position.

18. (Original) The method of claim 17 including the step of providing a second X block that interacts with the second X mirror to monitor the position of the device table in an operational position.

19. (Original) The method of claim 16 wherein the step of determining the position includes the step of measuring (i) the position of the first fiducial mark relative to the first X mirror and the second X mirror, and (ii) the position of the second fiducial mark relative to the first X mirror and the second X mirror.

20. (Currently Amended) The method of claim 19 wherein the step of determining the position of the first X mirror relative to the second X mirror includes utilizing the measured position of the first fiducial mark relative to the first X mirror and the second X mirror, and the measured position of the second fiducial mark relative to the first X mirror and the second X mirror to determine the relative position of the first and second X mirrors.

21. (Original) The method of claim 16 including the step of securing a third fiducial mark to the device table, the third fiducial mark also being used to determine the position of the first X mirror relative to the second X mirror.

22. (Original) The method of claim 21 wherein the step of determining the position includes the step of measuring (i) the position of the first fiducial mark relative to the first X mirror and the second X mirror, (ii) the position of the second fiducial mark relative to the first X mirror and the second X mirror, and (iii) the position of the third fiducial mark relative to the first X mirror and the second X mirror.

23. (Currently Amended) The method of claim 22 wherein the step of determining the position of the first X mirror relative to the second X mirror includes utilizing the measured position of the first fiducial mark relative to the first X mirror and the second X mirror, the measured position of the second fiducial mark relative to the first X mirror and the second X mirror, and the measured position of the third fiducial mark relative to the first X mirror and the second X mirror to determine the relative position of the first and second X mirrors.

24. (Previously Presented) A method for making a stage assembly that moves a device, the method comprising the steps of:

providing a device table for retaining the device;

connecting a stage mover assembly to the device table, the stage mover assembly moving the device table;

providing a measurement system that monitors a position of the device table, the measurement system including a first X mirror, a second X mirror, and a Y mirror that are secured to the device table;

providing a first fiducial mark and a second fiducial mark for the device table;

and

providing a controller that determines the position of the first X mirror relative to the second X mirror using the first fiducial mark and the second fiducial mark.

25. (Previously Presented) The method of claim 24 wherein the controller determines the position by measuring (i) the position of the first fiducial mark relative to the first X mirror, the second X mirror, and the Y mirror, and (ii) the position of the second fiducial mark relative to the first X mirror, the second X mirror, and the Y mirror.

26. (Previously Presented) The method of claim 25 wherein the controller determines the position of the first X mirror relative to the second X mirror by utilizing the measured position of the first fiducial mark relative to the first X mirror, the second X mirror, and the Y mirror, and the measured position of the second fiducial mark relative to the first X mirror, the second X mirror, and the Y mirror.

27. (Previously Presented) The method of claim 24 further comprising providing a third fiducial mark for the device table, the third fiducial mark also being used to determine the position of the first X mirror relative to the second X mirror.

28. (Previously Presented) The method of claim 27 wherein the controller determines the position by measuring (i) the position of the first fiducial mark relative to the first X mirror, the second X mirror, and the Y mirror, (ii) the position of the second fiducial mark relative to the first X mirror, the second X mirror, and the Y mirror, and (iii) the position of the third fiducial mark relative to the first X mirror, the second X mirror, and the Y mirror.

29. (Previously Presented) The method of claim 28 wherein the controller determines the position of the first X mirror relative to the second X mirror by utilizing the measured position of the first fiducial mark relative to the first X mirror, the second X mirror, and the Y mirror, the measured position of the second fiducial mark relative to the first X mirror, the second X mirror, and the Y mirror, and the measured position of the third fiducial mark relative to the first X mirror, the second X mirror, and the Y mirror.

30. (Original) A method for making an exposure apparatus that forms an image on a wafer, the method comprising the steps of:

providing an irradiation apparatus that irradiates the wafer with radiation to form the image on the wafer; and

providing the stage assembly made by the method of claim 24.

31. (Cancelled)

32. (Currently Amended) A method of making a device comprising the steps of:

providing a first movable stage that moves in a first direction and a second direction different from the first direction, the first movable stage holding ~~the device~~ a substrate and having a first reflective portion extending in the first direction, a second reflective portion parallel to the first reflective portion, and a first mark portion having a plurality of fiducial marks;

providing a first position detector that detects a position of the first movable stage cooperating with the first reflective portion;

providing a first mark detector that detects the plurality of fiducial marks when the first position detector detects the position of the first movable stage;

providing a second position detector that detects a position of the first movable stage cooperating with the second reflective portion;

providing a second mark detector that detects the plurality of fiducial marks when the second position detector detects the position of the first movable stage;

providing a controller that communicates with the first position detector, the second position detector, the first mark detector, and the second mark detector to correlate the first reflective portion with the second reflective portion;

exposing a pattern onto the ~~device~~ substrate by a projection system while the substrate is held by the first movable stage; and

~~assembling the device~~further processing the substrate on which the pattern has been formed in order to produce the device.

33. (Previously Presented) The exposure apparatus of claim 13, wherein the first position detector and the second position detector comprise an interferometer system.

34. (Previously Presented) The exposure apparatus of claim 13, wherein the first movable stage has a third reflective portion extending in the second direction.

35. (Previously Presented) The exposure apparatus of claim 13, wherein the first movable stage is a cantilevered stage.

36. (Previously Presented) The exposure apparatus of claim 13, wherein each of the plurality of fiducial marks of the first mark portion comprises a two dimensional mark.

37. (Previously Presented) The exposure apparatus of claim 13, further comprising a second movable stage that moves in the first direction and the second direction, the second movable stage holding a second substrate and having a fourth reflective portion extending in the first direction, a fifth reflective portion parallel to the fourth reflective portion, and a second mark portion having a plurality of fiducial marks.

38. (Previously Presented) The exposure apparatus of claim 37, wherein the controller correlates the fourth reflective portion with the fifth reflective portion.

39. (Previously Presented) The exposure apparatus of claim 37, further comprising a replacer that replaces the first and second movable stages with respect to the first and second position detectors.

40. (Previously Presented) The exposure apparatus of claim 39, wherein the first mark detector detects the second mark portion when the first position detector detects a position of the second movable stage cooperating with the fourth reflective portion.

41. (Previously Presented) The exposure apparatus of claim 39, wherein the second mark detector detects the second mark portion when the second position detector detects a position of the second movable stage cooperating with the fifth reflective portion.

42. (Previously Presented) The exposure apparatus of claim 37, wherein the second movable stage has a sixth reflective portion extending in the second direction.

43. (Previously Presented) The exposure apparatus of claim 37, wherein the second movable stage is a cantilevered stage.

44. (Previously Presented) The exposure apparatus of claim 37, wherein each of the plurality of fiducial marks of the second mark portion comprises a two dimensional mark.